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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,594	11/01/2003	Drew R. Ivers	1379-010	1639

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EXAMINER

MEHTA, ASHWIN D

ART UNIT PAPER NUMBER

1638

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/698,594

Applicant(s)

IVERS, DREW R.

Examiner

Ashwin Mehta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4152005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1, 6, 22, 23, 28 are objected to for containing a blank line where the ATCC accession number should be. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 6, 22, 23, 24, 28, and 29: the claims are indefinite for the recitation, "SG1431RR". This is an arbitrarily assigned name for a soybean variety. It does not define any traits possessed by the variety. This name can also be changed or arbitrarily assigned to any other plant line. Inclusion of the ATCC accession number into claims 1, 6, 22, 23, and 28 will obviate the rejection.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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3. Claims 8 and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims are broadly drawn towards any hybrid soybean seed produced by crossing a soybean plant of line "SG1431RR" with any different soybean plant; or a hybrid soybean plant, or parts thereof, produced by growing said hybrid seed.

The specification provides some morphological and physiological characteristics of plants of soybean line "SG1431RR" (paragraphs [0054]-[0071], pages 9-10).

A review of the full content of the specification indicates that seed of soybean plant SG1431RR, hybrid seed produced by crossing a SG1431RR plant with any other soybean plant, are essential to the operation and function of the claimed invention.

A review of the language of claims 9 and 10 indicates that they are drawn to a genus, i.e., any and all F1 hybrid soybean seeds, and the hybrid soybean plants produced by growing said hybrid seeds, wherein the hybrid seeds are produced by crossing soybean plant SG1431RR with a second, distinct soybean plant. Variation is expected in the complete genomes and phenotypes of the different F1 hybrid species of the genus, since each hybrid has one non-SG1431RR parent that is not shared with the other hybrids. Each of the hybrids would inherit a different set of alleles from the non-SG1431RR parent. As a result, the complete genomic structure of each hybrid, and therefore the morphological and physiological characteristics expressed by each hybrid, would differ. Any given specie of the claimed genus would not be representative of any

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other specie. Given the breadth of the claims encompassing all hybrid soybean seeds and plants produced by crossing SG1431RR with any other soybean plant, it is submitted that the specification fails to provide an adequate written description of the multitude of soybean seeds and plants encompassed by the claims.

4. Claims 1-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 is drawn towards seed of soybean line SG1431RR. Claims 2-33, are drawn towards a soybean plant produced by growing said seed, methods comprising using soybean plant SG1431RR, hybrid soybean seeds and plants having SG1431RR as a parent, and products produced from the methods.

The claimed seed of soybean variety SG1431RR is essential to the claimed invention. It must be obtainable by a repeatable method set forth in the specification or otherwise be readily available to the public. If the seed is not so obtainable or available, a deposit thereof may satisfy the requirements of 35 U.S.C. 112. The specification does not disclose a repeatable process to obtain the exact same seed in each occurrence and it is not apparent if such a seed is readily available to the public. A deposit of the seeds of inbred soybean line SG1431RR with an acceptable depository is required. Page 29 of the specification indicates that a deposit of said seed with the ATCC has not yet been made.

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If the seeds will be deposited under the terms of the Budapest Treaty, then an affidavit or declaration by the applicants, or a statement by an attorney of record over his or her signature and registration number, must also be submitted, stating that the seeds will be irrevocably and without restriction or condition released to the public upon the issuance of a patent. A minimum deposit of 2500 seeds is considered sufficient in the ordinary case to assure availability through the period for which a deposit must be maintained. See 37 CFR 1.801-1.809.

If the deposit will not be made under the Budapest Treaty, then in order to certify that the deposit meets the criteria set forth in 37 CFR 1.801-1.809, Applicants may provide assurance of compliance by an affidavit or declaration, or by a statement by an attorney of record over his or her signature and registration number showing that

(a) during the pendency of the application, access to the invention will be afforded to the Commissioner upon request;

(b) all restrictions upon availability to the public will be irrevocably removed upon granting of the patent;

(c) the deposit will be maintained in a public depository for a period of 30 years or 5 years after the last request or for the enforceable life of the patent, whichever is longer;

(d) the viability of the biological material at the time of deposit will be tested (see 37 CFR 1.807); and

(e) the deposit will be replaced if it should ever become inviable.

Claim Rejections - 35 USC § 102 & 103(a)

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-13, 15, 16, 18, 19, 22, 23, 24, and 27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Eby (U.S. Patent No. 6187998, issued February 13, 2001).

The claims are broadly drawn towards seed of soybean line SG1431RR; a soybean plant produced by growing said seed; tissue culture of cells from tissues of said plant; a method of producing F1 hybrid soybean seeds comprising crossing SG1431RR with a different soybean plant, and hybrid soybean seeds and plants produced by said method; methods of producing male sterile, herbicide resistant, insect resistant, or disease resistant soybean plants, or soybean plants having modified fatty acid or carbohydrate metabolism, comprising transforming soybean plant SG1431RR with a transgene conferring one of said traits; a method of introducing a desired trait into soybean line SG1431RR, comprising crossing SG1431RR with another soybean line that has the desired trait, and plants produced by said method.

Eby teaches seeds, plants and parts thereof of soybean variety "61584642." Like SG1431RR of the instant application, 61584642 has purple flowers, light tawny pubescence

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color, brown pods, brown hila, indeterminate plant habit, are resistant to Roundup Ready herbicide, and is in maturity group I (col. 6). Rhodes also teaches tissue culture of regenerable cells of 61584642, or wherein the cells are from tissues including leaves, embryos, and roots; soybean plants regenerated from said tissue culture that have all the morphological and physiological traits of 61584642; method for producing seed comprising crossing 61584642 with a second soybean plant, and seeds and plants produced by said method; transforming 61584642 with desired transgenes, including those conferring male sterility, herbicide resistance, insect resistance, disease resistance (claims, cols. 6, 7, 9). Rhodes also teaches methods of producing soybean plants by using 61584642 in breeding techniques, such as pedigree breeding and recurrent selection, comprising crossing 61584642 with a soybean plant comprising the desired trait, selecting progeny that have the trait, and repeatedly crossing it with 61584642 until essentially all of the desired morphological and physiological traits of 61584642 are recovered in addition to the transferred trait or gene. The resultant plant is referred to as a "single gene converted plant" (claims; columns 2-3, 8-10). It is unclear if soybean plant 61584642 of Eby is the same as SG1431RR of the instant invention. As the instant application lists only a few traits of SG1431RR, the USPTO cannot determine if the genotype of 61584642 differs from that of SG1431RR. Eby does not disclose the plant type of 61584642. The other listed traits, such as seed protein and oil content and plant height, can differ due to environmental factors, not due to differences in the genome. The USPTO does not have sufficient facts to determine if the plants are the same, and cannot conclude that the claimed subject matter would have been obvious since it cannot determine if the plants differ. The USPTO is not in a position to make a conclusion of "inherency/anticipation" or "obviousness" since the record does not allow one to

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determine if and how the claimed subject matter differs from the prior art. Accordingly, the burden shifts to Applicants to provide evidence that the prior art would neither anticipate nor render obvious the claimed invention. See *In re Best* 195 USPQ 430, 433 (CCPA 1977).

6. Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eby (U.S. Patent No. 61584642, issued February 13, 2001) in combination with Schultze (U.S. Patent No. 6909035, issued June 21, 2005, filed April 7, 2003).

The claims are broadly drawn towards seed of soybean line SG1431RR; a soybean plant produced by growing said seed; tissue culture of cells from tissues of said plant; a method of producing F1 hybrid soybean seeds comprising crossing SG1431RR with a different soybean plant, and hybrid soybean seeds and plants produced by said method; methods of producing male sterile, herbicide resistant, insect resistant, or disease resistant soybean plants comprising transforming soybean plant SG1431RR with a transgene conferring one of said traits; a method of introducing a desired trait into soybean line SG1431RR, comprising crossing SG1431RR with another soybean line that has the desired trait, and plants produced by said method.

Eby teaches seeds, plants and parts thereof of soybean variety "61584642," which may be the same as SG1431RR, and methods comprising its use, as discussed above.

Eby does not teach transgenes that confer resistance to the particular herbicides or insect recited in claims 14, 17, 25, or 26, or particular nucleic acids that modify fatty acid or carbohydrate metabolism recited in claims 20 and 28.

Schultze teaches introducing transgenes into soybean plants conferring resistance against herbicides, including imidazolinone, sulfonylurea, glyphosate, glufosinate, L-phosphinothricin,

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triazine, and benzonitrile; and transgenes conferring resistance against insects, including a *Bacillus thuringiensis* endotoxin; and genes that modify fatty acid or carbohydrate metabolism, including phytase, stearyl-ACP desaturase, fructosyltransferase, levansucrase, alpha-amylase, invertase, and starch branching enzyme. The transgenes may be introduced by transformation, or by crossing with a soybean plant comprising the trait or nucleic acid, and then repeatedly backcrossing with the original parent (col. 11, line 65 to col. 12, line 6; col. 13, line 50 to col. 17, line 4).

It would have been obvious and within the scope of one of ordinary skill in the art to modify the soybean plant of Eby by introducing into it any of the genes taught by Schultze. One would have been motivated to introduce the genes conferring any of these herbicide resistance genes and endotoxin gene into the soybean plant of Eby, as they would confer the obviously desirable traits of resistance against a variety of herbicides, or insects. One would have been motivated to modify carbohydrate or fatty acid composition of soybean, given that these provide value-added traits, and that oils are extracted from soybean for a number of uses (col. 14, lines 29-30; col. 18, lines 9-18).

6. Claims 1-29 are rejected.

Contact Information

Any inquiry concerning this or earlier communications from the Examiner should be directed to Ashwin Mehta, whose telephone number is 571-272-0803. The Examiner can normally be reached from 8:00 A.M to 5:30 P.M. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Anne Marie Grunberg, can be reached at 571-272-0975. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300. Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can

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now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

June 12, 2006



Ashwin D. Mehta, Ph.D.
Primary Examiner
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ATTACHMENT TO OFFICE ACTION

Request for Information under 37 CFR § 1.105

1. Applicant and the assignee of this application are required under 37 CFR § 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.

2. This request is being made for the following reasons:

Applicant is claiming a seed comprising at least 50% of the genome of soybean line SG1431RR, and soybean plants produced in methods that comprise performing crosses with soybean plant SG1431RR. However, the instant specification is silent about what starting materials and methods were used to produce soybean line SG1431RR. The requested information is required to make a meaningful and complete search of the prior art.

3. In response to this requirement, please provide answers to each of the following interrogatories eliciting factual information:

(i) What were (are) the original parental soybean lines used to produce soybean line SG1431RR? Please supply all of the designations/denominations used for the original parental soybean lines and line SG1431RR. Please supply information pertaining to the lineage of the original parental lines back to any publicly available varieties.

(ii) What method and method steps were used to produce soybean line SG1431RR?

(iii) At or before the time of filing of the instant application or any provisional application to which benefit is claimed, had any of said parental soybean lines or progeny therefrom been disclosed or made publicly available? If so, under what

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designation/denomination and under what conditions were said parental soybean lines or progeny disclosed or made publicly available and from when to when?

(iv) At or before the time of filing of the instant application or any provisional application to which benefit is claimed, were any other soybean lines produced by said method using said original parental soybean lines, and if so, had said produced soybean lines been publicly available or sold? If so, under what designation/denomination and under what conditions were said other soybean lines disclosed or made publicly available and from when to when?

3. If Applicant views any or all of the above requested information as a Trade Secret, then Applicant should follow the guidance of MPEP § 724.02 when submitting the requested information.

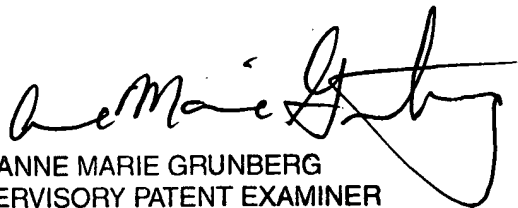
4. In responding to those requirements that require copies of documents, where the document is a bound text or a single article over 50 pages, the requirement may be met by providing copies of those pages that provide the particular subject matter indicated in the requirement, or where such subject matter is not indicated, the subject matter found in applicant's disclosure. Please indicate where the relevant information can be found.

5. The fee and certification requirements of 37 CFR § 1.97 are waived for those documents submitted in reply to this requirement. This waiver extends only to those documents within the scope of this requirement under 37 CFR § 1.105 that are included in the applicant's first complete communication responding to this requirement. Any supplemental replies subsequent to the first communication responding to this requirement and any information disclosures beyond the scope of this requirement under 37 CFR § 1.105 are subject to the fee and certification requirements of 37 CFR § 1.97.

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6. The Applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR § 1.56. Where the applicant does not have or cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained may be accepted as a complete reply to the requirement for that item.

7. This requirement is an attachment of the enclosed Office action. A complete reply to the enclosed Office action must include a complete reply to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action.


ANNE MARIE GRUNBERG
SUPERVISORY PATENT EXAMINER